

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-16 are pending in this application. Claims 1, 2, 4-8, 11, and 12 are amended, and Claims 13-16 are added by the present amendment.

Amendments to the claims and new claims find support in the application as originally filed. Thus, no new matter is added.

In the outstanding Office Action dated January 8, 2009, Claims 1, 2, 9, and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Japanese Patent Publication 3-067882 to Masaki; Claims 3-5 were rejected under 35 U.S.C. § 103(a) as unpatentable over Masaki in view of Japanese Patent Publication 2004-123279 to Araki; and Claims 6-8, 10, and 11 were indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Initially, Applicants gratefully acknowledge the indication of allowability of Claims 6-8, 10, and 11. In addition, Applicants and Applicants' representative gratefully acknowledge the courtesy of an interview with Examiner Colon-Santana on February 4, 2009. During the interview, differences between the references in the Office Action and the claimed invention were discussed. Examiner Colon-Santana indicated that previously presented Claims 4 and 5 and amended Claims 1 and 12, as well as new Claims 13 and 14 appear to patentably define over the cited references. Comments and claim amendments discussed during the interview are reiterated below.

Amended Claim 1 is directed to an elevator rope slippage detecting device for detecting presence/absence of slippage between a rope that moves together with movement of a car, and a pulley around which the rope is wound and which is rotated through movement of the rope. The device includes, in part, a pulley sensor configured to generate a signal in

accordance with rotation of the pulley, and a rope speed sensor configured to generate a movement speed of the rope based on an observation of the rope.

As discussed during the interview, the references in the Office Action fail to teach or suggest each of the features of Claim 1. For example, Masaki and Araki fail to teach or suggest a rope speed sensor configured to generate a movement speed of a rope based on an observation of the rope.

Masaki describes an abnormality detecting device of an elevator that compares a rotational acceleration signal of an electric motor with a cage acceleration signal to generate a main rope slip signal.¹ Further, Masaki discusses that “a differentiating circuit 1-20 for differentiation-calculating a speed signal Pb to generate a rotational acceleration signal α_b corresponding to rotational acceleration of an electric motor 5, differentiating circuit 2-21 for differentiation-calculating a speed signal Pd to generate a cage acceleration signal α_d corresponding to cage acceleration.”² Furthermore, Masaki Figure 1 shows an electric motor 5 connected to a sensor TG₁ 6 that produces the speed signal Pb, and a pulley 12 connected to a sensor TG₂ 15 that produces the speed signal Pd to generate the cage acceleration signal. However, as discussed during the interview, Masaki fails to indicate that sensor TG₂ 15 is anything other than a conventional pulley rotational sensor that senses a rotation of pulley 12. Accordingly, Masaki fails to teach or otherwise suggest any sensor that detects a movement speed of a rope based on an observation of the rope. Furthermore, as discussed during the interview, Araki also fails to teach or suggest the features lacking in the disclosure of Masaki.

Accordingly, as discussed during the interview, Masaki and Araki fail to teach or suggest “a rope speed sensor configured to generate a movement speed of the rope based on an observation of the rope,” as recited in independent Claim 1 and as similarly recited in independent Claim 12.

¹ Masaki at Abstract.

² Masaki at Abstract.

Therefore, it is respectfully submitted that independent Claims 1 and 12 patentably define over Masaki and Araki whether taken individually or in combination.

Thus, it is respectfully requested the rejection of Claims 1, 2, 9, and 12 under 35 U.S.C. § 102(b) as anticipated by Masaki be withdrawn.

Further, Applicants respectfully traverse the rejection of Claims 3-5 under 35 U.S.C. § 103(a) as unpatentable over Masaki in view of Araki.

As discussed above and during the interview, Claim 1 patentably defines over Masaki and Araki. Accordingly, Claims 3-5, which depend from Claim 1, patentably define over those references at least for that reason.

In addition, as discussed during the interview, Claim 4 is directed to an elevator rope slippage detecting device according to Claim 1, wherein the rope sensor includes a Doppler sensor configured to obtain the movement speed of the rope by measuring a difference in frequency between an oscillating wave irradiated to a surface of the rope and a reflected wave of the oscillating wave reflected by the surface of the rope. Furthermore, as discussed during the interview, the references in the Office Action fail to teach or suggest any rope sensor that performs a measurement including a reflected wave of an oscillating wave reflected by the surface of the rope, as required by Claims 4 and 5.

Accordingly, it is respectfully submitted that dependent Claims 4 and 5 also patentably define over Masaki and Araki for that distinct reason in addition to the reasons discussed above with respect to the independent claims.

Claim 13 is added to recite a device according to Claim 1, wherein the observation of the rope includes receiving an energy wave reflected from the rope. Claim 14 is added to recite a device of Claim 1, wherein the observation of the rope includes measuring a frequency of an oscillating wave reflected from the rope. Furthermore, Claims 15 and 16 are added to recite features similar to those of Claims 13 and 14 and dependent from Claim 12.

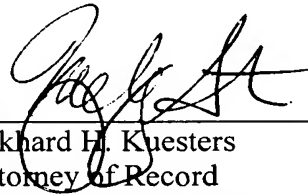
As discussed during the interview, the references in the Office Action also fail to teach or suggest the features of Claims 13-16.

Accordingly, Applicants respectfully submit that independent Claims 1 and 12, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment this application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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